

Rapid Lesson Sharing

Event Type: UTV Rollover

Date: August 8, 2025

Location: Billy Fire
Arizona

“UTV ROLLOVER—2 Red, 3 Yellow!”

**The IWI Incident Commander’s
initial transmission over Command**

The Story and Lessons from a UTV Rollover Incident

The Type 6 Engine Crew was assigned to a Structure Protection Group on the Billy Fire in the Sierra Ancha Mountains of central Arizona. This country is rugged and remote with ponderosa pine mixed with manzanita brush and yucca, and cool drainages containing Douglas-fir and sycamore trees.

The crew’s assignment for the day was to continue structure protection at Elks Camp (an outdoor summer camp). It was their second day on the fire.

They, along with a Task Force Leader Trainee, had been moved from another Division to help with structure protection. Most of the work was complete and the fire was not near the structures.

The crew was asked to move a hose lay. The Engine Captain, on assignment from a neighboring Forest, had experience working in this area. The crew felt confident with the assigned operations and use of their UTV. UTVs are the preferred mode of travel in that area where narrow, rough roads can beat up an engine.

UTV and Crew Somersault Backward into the Drainage

The five-person engine crew loaded up into the UTV with their gear for the day and drove to the hose lay, just a short distance up the road. The road beyond the hose lay was blocked by flagging due to poor road conditions ahead. Positioning themselves for quick egress, the UTV driver (Engine Boss Trainee) backed toward the road embankment. The rear tires sunk off the roadbed’s steep edge. Unable to gain traction, the UTV tilted, slid, and impacted something hard. The UTV and crew somersaulted backward down into the drainage—the crew, all wearing hardhats, hit the UTV ceiling as unrestrained bodies and gear tumbled in different directions.

The UTV landed upright on a large pile of boulders in the drainage bottom. The rear portion of the UTV roof was peeled back, but, otherwise, the Rollover Protection System (ROPS) appeared undamaged. None of the crew were wearing their seatbelts. Three of the firefighters were ejected from the UTV, while the other two stayed in their seats. Three of the firefighters were temporarily knocked unconscious, with the Engineer and Engine Captain being the most seriously injured. As they assessed the accident scene, all eyes focused on the Engineer who was bleeding badly from the scalp and forehead.

After approximately 10 minutes, the full crew scrambled their way back up the short, but steep embankment through raspberry bushes and loose rocks to the roadbed. The newest crew member set the Engineer’s head in her lap, holding direct pressure to his bleeding scalp and forehead. Another crew member went in search of a radio and more medical supplies in the “yard sale” of scattered gear and equipment below.



The UTV somersaulted backward down into the drainage—landing upright on a large pile of boulders.

“You don’t get any more remote in Arizona than where we were.”

The Injured Engine Captain

Task Force Leader Trainee Becomes IWI IC

The Engine Boss Trainee tried to reach the Task Force Leader Trainee on TAC—Nothing. Switching to Command, he reached the Task Force Leader Trainee and informed him that there had been a medical incident. The Engine Boss Trainee walked back down the road—approximately 200 yards—to Elks Camp where a Medic and REMS (Rapid Extraction Module Support) team were staged and asked them for medical help.

The Taskforce Leader Trainee arrived on scene to serve as the Incident Commander for this Incident Within an Incident (IWI). His initial transmission over Command: *“UTV ROLLOVER—2 Red, 3 Yellow!”* With that radio transmission, he had everyone’s full attention on the Billy Fire.

Resources started pouring into the UTV rollover site. In Young, Arizona, at ICP, the Type 3 Team staffed their IWI tent. Staff gathered poised to receive information coming in from the field to ensure the response followed their IWI plan.

Communications were run through the Forest dispatch center, located in Phoenix. It was a four-hour ground transport time from the UTV rollover site to Phoenix. Due to the severity of the patients and mechanism of injury, five helicopters were ordered, with a primary plan to transport them to the Trauma I Center in Scottsdale, Arizona.

Overhead in the Division started facilitating the IWI. Division Alpha prepared the Cagel Helispot (H-40) with dust mitigation and called in a Lat/Long for the site. Meanwhile, the Air Support Group Supervisor Trainee approved and called in a Lat/Long for a new helispot located closer to the IWI.

Taskforce Leaders and Divisions from Division Alpha and the Structure Group gathered at the UTV rollover site to make a plan for patient transport. It was decided to use the newly approved Rose Creek Helispot to land the agency helicopter configured with a backboard to transport to the closest Trauma IV Center located in Globe, Arizona (a 15-minute flight away).

Commercial air ambulance helicopters would fill in behind the agency helicopter. The overhead group dispersed with a clear plan that included a ground contact for the new Rose Creek Helispot and providing road guards to help navigate to the new helispot. In addition, the road into the UTV rollover site was cleared from all the responding resources.

Transporting the Patients

The first Red patient—the Engineer—is transported in an ambulance to the Rose Creek Helispot. A minute later, the second Red patient—the Engine Captain—leaves to the Cagel Helispot in a UTV with a REMS team. Moments later, the three Yellow patients are downgraded to “Green” and transported to the Rose Creek Helispot.

The Red patient—the Engineer—and most seriously injured Green patient are transported via commercial air ambulances to the Trauma I Center in Scottsdale. The two other Green patients are flown via the agency helicopter to the Trauma IV Center. The remaining Red patient’s transport, delayed due to helicopter communication issues, is



The turnaround site where the UTV slid off the road. The UTV backed towards the engine, departing the road where the blue arrow is pointed.

the last to leave the scene. All five patients were met at the trauma centers by Hospital Liaisons.

By the end of the night, everyone was released from their hospitals with orders “not to return to work until cleared by a physician.” While two of the patients were released to full duty shortly after a return visit to a physician, the other three patients required multiple follow-up appointments with physicians. This proved to be cumbersome administratively for the Engine Captain and Engineer and made having Hospital Liaison support essential.

The Engine Captain, Engineer, and crew member all required multiple appointments with physicians and specialists to receive treatment and rehabilitate injuries. Due to the mechanism of injury, some injuries were not identified in the initial trauma center visit. In one case, a concussion was identified two weeks after the incident.

All employees anticipate a full recovery.

Lessons

- ❖ **UTV Helmets, Seatbelts, and Doors.** Culturally, firefighters across USDA Forest Service Region 3 often do not wear the U.S. Department of Transportation (DOT) helmets and seatbelts. Due to frequent PPE changes and the better ability to hear the radio, they wear their hardhats. Roads and terrain that appear of low consequence can result in high-severity injuries when UTV occupants do not wear seatbelts and leave the Rollover Protection System (ROPS) without wearing a DOT helmet. Polaris UTVs come with a Seatbelt Warning advising how improper [lack of] use can result in severe injury or death. Operators and occupants are required to wear seatbelts and DOT-rated UTV helmets. This module had made a clear decision to leave the doors on the UTV. This may have helped prevent crush injuries to the occupants’ lower extremities. While full, the UTV was within its load limits. Additional items such as a pump unit would have overloaded this unit. The UTV occupants in this rollover incident expressed concern about securing gear and the lack of protection between the vehicle’s cab and its bed.
- ❖ **Prepare for an IWI.** Make sure all crew members are ready to initiate a Medical Incident Report. In this incident, the newest crew member was the least injured.
- ❖ **Know the Medical Plan.** Yellow Priority 2 patients would typically be transported to a Level I Trauma Center. Commercial air ambulance helicopters were ordered to meet this requirement. In an attempt to get patients to care more rapidly, overhead in the field made a clear plan to fly the agency helicopter to the closest hospital as quick transportation was a priority. The agency helicopter was local and had previously completed scenario-based trainings to transport patients to higher care. The closest hospital was a Level IV Trauma Center, where medical providers could complete patient assessment—but would have had limitations if the patient’s injuries were advanced. The Medical Unit Leader—who was not informed of the downgrade of patients to “Green” that occurred in the field—was concerned that transport to the Level IV Trauma Center would delay treatment. Ensure updates to patient triage assessment are made known. Changes in injury severity drive transport decisions and trauma center destinations. The patients originally triaged as Yellow continued to be referred to as “Yellow” patients throughout this incident.
- ❖ **Air Transport—Know the Difference.** Commercial air ambulance services operate within a “Certificate of Need” (a legal document issued by a state regulatory authority who fulfill the medical needs for an area). Medical Unit Leaders navigate this in the medical plan, accounting for this during extractions. Transport in an agency helicopter comes with caveats as they are not a licensed air ambulance service. Depending on the circumstance, this may delay care as agency helicopters may not be staffed with medical providers to ensure the patient’s continuation of care.
- ❖ **MCI (Mass Casualty Incident) Triage.** Assign medical care to each patient and have one Point of Contact for the IWI IC. The patients in this incident stated that there were multiple “asks” regarding their vitals and weight and that they did not have an EMT assigned to each patient.

- ❖ **Emergency Notifications.** Back on the Engine Crew’s home unit, the District Ranger and Fire Staff were only able to find three of the five Emergency Notification Forms. *Are yours completed and updated? Where do you keep your copies? Do you keep a set with your equipment?*
- ❖ **Hospital Liaisons.** The Type 3 Incident Management Team was prepared with Hospital Liaison response. Realizing the potential severity of this UTV rollover incident, five Hospital Liaisons were ordered (one for each patient). Hospital Liaisons were sent to both trauma centers. Communication with Forest Safety Managers ensured prompt updates from the liaisons were communicated back to key Forest and Incident personnel. The paperwork for workers’ compensation claims was completed by the Hospital Liaisons. After the initial incident had occurred, one Hospital Liaison ensured that the entire Engine Crew was taken care of and cleared to be brought back to work. The Incident Commander and Medical Unit Leader issued a letter stating the authorization for air ambulances which was passed on to the injured employees and Hospital Liaisons.
- ❖ **Patient Confidentiality and Social Media.** The injured Engine Crew members were dismayed to see multiple personnel filming the incident as they were being treated at the rollover site. The following day, information regarding the incident appeared on social media. Sharing information from the scene of a fatality or serious injury, including condolences, is strongly discouraged to allow time for compassionate notification of family members. Firefighters who take photos and videos of work-related activities and post them on their personal social media accounts must be mindful that images and messages reflect not only on their own professionalism, but also the professionalism of their unit, their agency, and the entire interagency wildland fire community.

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